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ORIGINAL CORRESPONDENCE.

For the Indiana Farmer and Gardener.

Farming in Wayne County--No. 2.

MR. EDITOR:—Your letter was duly received, but a multitude of professional engagements, and especially my absence from home during the last eight days, have rendered an answer before this time very inconvenient. And, indeed, at this time, I have not the leisure which the subject matter of your inquiry demands. In my last letter I stated, that our tillage of the ground in this part of the country was badly performed; and it is in reference to the mode of that tillage that I understand your inquiry to relate, with, perhaps, a reference to the cultivation of my *own* ground.

In the vicinity of Liberty, I have a small farm; but I have cultivated it with a view of raising provisions for my family only; and being able to do this, and following other pursuits more profitable, I have not paid that attention to the cultivation of my land, that has rendered its condition much superior to that of my neighbors' land. And without claiming any exemption for myself from the charge of bad farming, I will state a few particulars, in which, I think, it consists. It may, however, be proper to state, that a well-directed system of farming, would make the farmers of this and the adjoining counties to raise three times the quantity of provisions that are now raised on their land. Of this I have no doubt.—Perhaps it would require three times the labor; but any one will perceive, that two-thirds of the capital employed would be saved, and the profits be the same.

One of my first objections to our present system of agriculture is, the practice of fallowing the ground. As it is now practiced, it is a permanent injury to the soil; nor do I believe that it can be followed with beneficial results in any way whatever. But the practice to which I particularly allude, and which is almost universally employed, is that of allowing the ground to lie exposed to the burning sun during the summer, without any other protection than that which is furnished by a few weeds of spontaneous growth; and if some grass has been previously sown, it is generally pastured until the ground is exposed to the action of the summer sun. An argillaceous soil becomes baked and hardened; a silicious one, cracked open; and if either should contain on, or near its surface, any vegetable or animal matter necessary to give it fertility, the gases of that matter are dissipated by the combined action of heat, moisture, and the oxygen of the air. If any rest from active tillage is at any time requisite, the ground should be quickly covered with grass of *some* kind, and so continue until the time of plowing for the crop.

Another objectionable practice, is that of pasturing our stubble-ground after wheat and oats have been taken off. This should never be done; and yet it is almost always done by every farmer. On land off of which wheat, or oats, or barley has been taken, a crop of weeds as well as grass generally springs up. The weeds give but little nour-

ishment to cattle, but a great deal to the soil if properly managed. My own practice has been unchangeable for the last ten years in this respect. When wheat has been taken from the ground, the weeds and grass are permitted to grow undisturbed until the last of September or the first of October; the ground is then deeply plowed and permitted to remain in that condition until the following spring, when it is re-plowed, and the spring crop planted or sowed. In this way, I am confident that land of ordinary richness, may be maintained for any length of time without one particle of manure from the barn. I have fully tried the experiment. The succession of my crops in the experiments made by me, has been oats, then wheat, and lastly corn. When the oats were taken from the field, the grass was permitted to grow until about the middle of September. The ground was then plowed, and allowed to remain until wheat-seeding time, when it was plowed again. Two plowings are preferable to one in this;—if the plowing is done at seeding time, the oats come up with the wheat and often do it an injury. In some winters, the oats serve as a protection to the wheat. The propriety of sowing wheat on oat stubble has been very much doubted; but I think without just cause.

Another objection to our system of farming consists in the management of our meadows. They are too frequently pastured; indeed they should never be pastured; but if at any time cattle are allowed to run on meadow grounds, great care should be taken in the selection of times. But the greatest objection is to the time of cutting, and the manner of saving the grass. At what time should grass be cut? This question with reference to timothy, herdsgrass, and grasses of a similar kind, has been much debated in this part of the country. The advocates of late cutting contend, that the hay is easier and better cured; that what is lost in the drying of the stock is saved in the seed; that it is more convenient to cut the grass after wheat harvest, than it is during that time. On the other hand it is contended, that in cutting immediately after the blossom has turned, the stock is more nutricious, the hay is sweeter and more easily cured, and that meadows are saved from the injurious consequences of late cutting. Practical experience has satisfied me, that the hay is better and more nutricious when early cut—that early cutting is indispensable to the preservation of the meadow. Good meadows are frequently ruined in five or six years by late cuttings. When the grass is cut too late, the stock and roots are dry. The vital power of the roots becomes so far exhausted, that, when exposed to the burning sun, they perish. But this is not the only objection. When the power of reproduction is left unimpaired in the root, the grass furnishes the means, in some degree, of repairing the exhaustion to which the ground has been subject in raising the crop. But another great error in saving the hay consists in letting it get wet after it is mown. I would rather have one ton of hay well cured and put up without getting wet, than to have two tons, which has been rained on at any time after the hay is half cured. Time, and additional labor, will cure some of these objections and errors.

In the cultivation of corn crops, our errors are numerous and palpable. Little attention is paid to the time and manner of putting it in the ground: and when planted it is seldom tilled in such a manner as to justify the expectation which the farmer had formed of his future crop. Generally speaking, each farmer in this country plants twice as much ground as he has the means of tilling well. The consequence is, that he is constantly hurried;—plows his ground twice or thrice, but he seldom hoes it.—Weeds choke the corn. A large portion of the nutriment in the soil, is given to support the rank growth of weeds, and the grain suffers in a corresponding degree. I cannot be in error in saying, that, as a general rule, in our tillage of corn one half of the exhaustion to which our land is subject results from the overgrown crop of weeds that are permitted to grow on the ground and to perish without giving any additional richness to the soil. If the weeds while green and well grown could be turned under, it would not be so bad: but this cannot very well be done. I have said that too much ground is tilled in corn. The farmer in consequence of this, is obliged to plow when he has leisure, without consulting the condition of his ground or his corn. No soil can be profitably plowed when it is too wet. To soil where clay in its composition preponderates, it is positively injurious; and very often, the soil and the crop on it are so much injured as to disappoint the hopes which subsequent good tillage in that year would be calculated to inspire. The soil for corn should be well and deeply plowed. The planting should be early and well performed. Three plowings and two hoeings, at a time when the ground is not too wet, are indispensable to make a good crop of corn: and if the ground is foul, it will require more.

In no part of our farming operations do we commit greater errors than in the formation and preservation of our manures, and in the time and manner of applying them to the soil. A detailed examination of this

branch of the subject requires more time than I have leisure to bestow. A few remarks on this subject must, for the present, suffice. In the first place, very little care is taken to preserve manures. They are permitted to remain exposed to rains which wash away their nutricious parts; and the action of the atmosphere dissipates much of the most valuable gases. When manures are taken from the barn to the field, they are thrown in heaps, and permitted to lie in that condition unburied, until their most valuable substances are wasted. This is wrong.—They should be spread and buried with the plow without any unreasonable delay. In the second place, I will say, that the time of putting the manure on the ground, considered with reference to the soil and the quality of the manure, is less regarded than any thing connected with the subject of manures. To know when the application to the soil should be made, a knowledge of the different qualities of soil, and the chemical decomposition of vegetable matter (and I may add animal) should be thoroughly understood. To the calcareous or silicious soils, manure perfectly rotted can be (all seasons considered) applied with entire safety, and with beneficial results. To argilaceous soils the treatment should be different. They are colder than the others, and require the warmth arising from the decomposition of manures. To this soil I would invariably apply the manure, both animal and vegetable, as soon as it has passed through the first process of fermentation. Its further decomposition is then completed in the field. A durable warmth is given to the soil and growing plant. The gases are taken up as they are formed; and in every point of view its application to this kind of soil, in an imperfectly decomposed state, is preferable: but I must let this suffice for the present. There are several other subjects, connected with farming, to which I would have been pleased to direct public attention; but for the present, I must pass them by.

Yours, &c.

JAMES PERRY.

Spaying Heifers.

Spaying Heifers when young, for the purpose of feeding, is a very valuable practice indeed for graziers, and one that no good grazier should neglect extensively introducing into his herds. We presume that it is known to the generality of our readers, that a heifer, (open or spayed,) of equal fatness and weight with the best steer, is worth more per pound to the butcher in any market than the steer, for two reasons: first, her meat, *all over*, is of a finer grain, and she has more weight of prime cuts than a steer consequently less coarse meat and offal; secondly, heifers invariably tallow better than steers, and the *spayed* heifer still better than the open one. Again, heifers are always better "*handlers*" than steers, a sure criterion that they are better and quicker feeders. And another important fact, perhaps not generally known, is, that you can feed five heifers on the same food for any purpose, that it will take to feed four steers upon. This fact has been long since determined from a series of experiments made by the best and most extensive graziers and stall-feeders in Ireland, the particulars of which may be found in "Dr. Radcliff's reports to the Farming Society of Ireland," when Secretary to that body. And there is still another, and the most important fact of all, to be noticed about spaying heifers; it is this, that the most indifferent and stunted heifer, taken when between twelve and eighteen months old and spayed, will, before she is five years old, overtake and in every way equal the best open heifer in the herd, whose relative value at the time of spaying was as two to one in favor of the open heifer. This is a fact that we shall not now stop to give the causes of. It is sufficient for graziers generally, and those of this State in particular, whose attention we call to this subject, to be told that it is *a fact, well ascertained*, and upon which they can most implicitly rely—one that years of experience have fully proved and tested. We must conclude these already lengthy remarks on this subject, by saying that, in this country, where there is so much and such fine summer pasture in our fields and open ranges, where heifers are so liable to get in calf, it appears to us that spaying heifers would be more useful and applicable than in Great Britain or Ireland, where it is so much in use, and is found to be so very profitable.—*Lou. Jour.*

To Destroy Rats.

The following recipe for the destruction of rats has been communicated by Dr. Ure to the council of the English Agricultural Society, and is highly recommended as the best known means of getting rid of these most obnoxious and destructive vermin. It has been tried by several intelligent persons and found perfectly effectual. Melt hog's lard in a bottle plunged in water, heated to about 150 deg. Fahrenheit: introduce into it half an ounce of phosphorus for every lb. of lard; then add a pint of proof spirit or whiskey; cork the bottle firmly after its contents have been heated to 150 deg., taking it at the same time out of the water; agitate it smartly till the phosphorus becomes uniformly diffused, forming a milky-looking

liquid. This liquid being cooled, will afford a white compound of phosphorus and lard, from which the spirit spontaneously separates, and may be poured off to be used again, for none of it enters into the combination, but it merely serves to comminute the phosphorus, and diffuse it in very fine particles through the lard. This fairy compound, on being warmed very gently, may be poured out into a mixture of wheat flour, and sugar incorporated therewith, and then flavored with oil of rhodium or not, at pleasure. The flavor may be varied with oil of anniseed. This dough, being made into pellets, is to be laid in rat holes. By its luminousness in the dark, it attracts their notice, and being agreeable to their palates and noses, it is readily eaten, and proves certainly fatal. They soon are seen issuing from their lurking places to seek for water to quench their burning thirst and bowels, and they commonly die near the water. They continue to eat as long as it is offered to them, without being deterred by the fate of their fellows, as is known to be the case with arsenical doses. It may be an easy guide for those who are desirous of following Dr. Ure's prescription, and may not have a thermometer at hand, to know that water as hot as the *hand* will bear it is about 125 deg. Of course to have 150 deg. it must be a little hotter than the hand can endure.

Dr. R. J. Breckenridge in England.—In reading the volumes just published, containing memoranda of Dr. Breckenridge's travels in Europe some ten years ago, we marked some passages which we give below:

English and American Rivers compared.

"A gentleman-like and well-informed Englishman, who was in the stage-coach with me, and who had found out I was an American, after dilating on the greatness, the beauties, the majesty, in short, of this noblest of British rivers, (the Thames,) concluded thus: 'Sir, it may seem almost incredible to you, but it is nevertheless true, that this prodigious stream is, from its mouth to its source, not much, if at all, short of one hundred and fifty miles long!'—I looked steadfastly in his face, to see if he jested; but the gravity of deep conviction was upon it. Indeed, John Bull never jests. After composing myself a moment, I slowly responded: "Perhaps, sir, you have never heard of the river Ohio?' 'I think I have.' 'Perhaps of the Missouri?' 'I think so, though not sure.' 'Certainly of the Mississippi?'—'Oh yes, yes.' 'Well, sir; a man will descend the Ohio, in a steamboat of the largest class, a thousand miles.' 'Of what, Sir!—how many, Sir!'——'A thousand miles; and there he will meet another steamboat, of the same class, which has come in an opposite direction, twelve hundred miles down the Missouri, and then after going fifteen hundred miles more, down the Mississippi, he may see that flood of waters disembogue by fifty channels into the sea!' I had made up my mind to be considered a cheat; so I went calmly and emphatically through the statement! As I progressed, my companion seemed somewhat to take my story as a personal affront; but at its close, he let down his visage into a contemptuous pout, and regularly cut my acquaintance."

The Rothschilds Excommunicated.—"Our last advices from Jerusalem," says the *Gazette des Tribunaux*, "mention that the Synagogue of that city, whose members are known for their deep aversion to every innovation, and to progress in general, have pronounced a sentence of excommunication against all the Israelites who should participate, either as collectors or donors, in the subscription now open in Europe for the purpose of encouraging agriculture among the Jews of Asia, and establishing at Jerusalem, for the indigent of those same Jews, an extensive hospital, and schools for adults and children of both sexes. Among the persons visited with this anathema are the heads of the different branches of the Rothschilds, who have subscribed 100,000 francs towards that charitable undertaking."

A hint to Ladies.—T. Hood, in his new work, says—"It is a treat to see Prudery get into an omnibus. Of course she rejects the hand that is held out to her by male Civility. It might give her a squeeze. Neither does she take the first vacant place; but looks out for a seat, if possible, between an innocent little girl and an old woman. In the mean time the omnibus moves on. Prudery totters, makes a snatch at Civility's nose, or his neck, or anywhere, and missing her hold, rebounds to the other side of the vehicle, and plumps down in a strange gentleman's lap. True modesty would have escaped all these indecorums."

The best stock a man can invest in, is the stock of a farm; the best shares are plowshares; and the best banks are the fertile banks of a rural stream: the more these are broken the better dividends they pay.

Flowers.

Love in the myrtle bloom is seen,
Remembrance to the violet clings,
Peace brightens in the olive green,
Hope from the half-closed iris springs,
And vict'ry on the laurel grows,—
But woman blushes in the rose.

INDIANA FARMER & GARDENER.

Indianapolis, February 22, 1845.

Notices.

☞ M. G. and R. will appear in the next number. We should be glad to hear again from both of them.

☞ Some newspapers state our terms to be *one dollar*. This is true for single subscribers. But to encourage every one who wishes to procure his neighbors to subscribe also, we send it to clubs of ten, for one half —only 50 cents! There is not a man in the State too poor to give 50 cents for 400 pages as well got up as the Indiana Farmer and Gardener; and we are glad to see by our books, that farmers are of the same opinion.

☞ If newspapers entitled to the Indiana Farmer and Gardener do not receive it, they will please inform us.

☞ We have been obliged to defer our article upon Draining to another number.

☞ The prospects are, that spring will be upon us very early. Sugar has been made this three weeks past. It is high time for those who have sugar orchards to be about their business.

☞ If this open and mild weather continues, grape vines must soon be pruned and laid in. From present appearances they ought to be attended to in the last of this month.

☞ Where hyacinths, tulips, &c. are breaking ground (a sure sign of two shallow planting) they should be covered with light litter, or cold nights will very much weaken them. The bulb is hardy enough; but severe cold affects the *flower*.

☞ As there is a *Western Farmer and Gardener* at Cincinnati (may its shadow never be less! we have often sat down under it with great delight) we request Editors extracting from our pages, and correspondents sending to us, to be careful in remembering our *given* name, viz: INDIANA *Farmer and Gardener*. Though we should be well pleased if our articles were thought worthy of appearing as the offspring of the *Western Farmer and Gardener*, we are not so sure that friends Hooper and Elliot would be pleased with the reverse; and they might publish us as a mere Daw wearing Peacock feathers, albeit blameless of the theft and finery.

Labels for Trees, etc.

We were much rejoiced to find the following statement extracted from an English paper:

"*Zinc labels to write on with a common lead pencil.*—Durable labels are much wanted. Slightly rub with pumice stone the part upon which you wish to write, then write upon it with a common lead pencil, and when the letters have been exposed to the air for two or three days, they are indelible. Old zinc is preferable to new."

We had an abundance of old zinc, and forthwith cut out some hundreds, and wrote all the names of our fruit trees, &c. But instead of being indelible, they are most easily effaceable. Whether the fault is with us we know not, but zinc labels prepared as above are worthless. The cheapest and most durable label for common use is a strip of smooth wood rubbed with the sediments of white paint, and when dry, written on with a lead pencil. Labels of this kind should be examined and replaced about every other year.

Caution.

In trying the recipe, given in our columns, for killing rats, and we have faith in the process, be careful to keep the balls out of the reach of *children*. In killing rats people frequently, by sheer carelessness, poison their own children. We say, once for all, to all shiftless, heedless, careless folks, don't try such experiments.

Prairie Farmer.

We have received from the office of this very excellent paper, the volume for 1844, and the first two numbers for the current year. We have never seen the Prairie Farmer mentioned, except with commendation; and a summary examination of it leads us to believe the praise to be deserved.

We fear that our paper will be regarded as an intruder upon the realm of the Prairie Farmer; for, in noticing the Western Cultivator, Mr. Wright says: "We have considered Indiana a part of our own territory;" and adds: "We have a good opinion of the Hoosiers, numbering among them some of our most zealous friends and ablest contributors. *Still, we dont believe they will yet support an Agricultural paper, independent of foreign aid.*" Friend Wright is plainly wrong. Indiana will support two papers, and leave a slice for a third. He himself confesses in the beginning of his volume for 1845, an accession of subscribers from this State—while the Western Cultivator had, at the close of its first volume, attained to 1,000 subscribers; and if the present rate of subscribers to our paper continues through the year, we shall have to reprint our first numbers, though we thought we were issuing an ample edition.

The idea of but one Agricultural paper for the West is utterly unallowable. There is, already, the Ohio Cultivator, and Western Farmer and Gardener in Ohio; the Western Cultivator, the Indiana Farmer and Gardener in this State; and the Prairie Farmer for Illinois, Iowa, and Wiskonsan! Too much, —too much land for you to possess, friend Wright. If we lived in that region, we should certainly start another paper, and the result would be—*you* would double your list—and we should have, out of those left, quite enough for a living. The immortal Sam Patch of perpendicular memory, taught the world "that some things could be done as well as others."

Cultivation of Fruit.

[Continued.]

It will be borne in mind that our remarks upon the cultivation of fruit trees are not applicable to the processes of art employed in experimental gardens, or in climates requiring a highly artificial culture, but to gardens and open orchards of the pear and apple in the Western States.

Our climate and soil predispose fruit trees to excessive growth. There is, in the States of Ohio, Indiana, Illinois, and in the thickly settled portions of Missouri and Kentucky, very little poor soil. Limestone lands, clay lands, sandy loams and alluvions, afford not only variety of soil, but the strongest and most fertile. The forest trees of the West compared with the same species east of the Allegheny ridge, exhibit the difference of soils. Artificial processes may produce better soils, it may be, but there is not probably on earth so large a body of land which is, as uniformly, deep, strong, quick, and rich in all mineral and vegetable substances. It is cultivated under a climate most congenial to vegetation, both in respect to length and temperature. Our spring is early. In 1835 we gathered flowers from the woods, near Cincinnati, on the 22d of February. In 1839 we gathered them at Lawrenceburgh, Ia., in the last week of February. We find in our garden journal at Indianapolis, Ia., latitude 39°55′ north, March 11, 1840, "rose bushes, honey-suckles, and willow trees had been in leaf for some days," and seed-sowing had begun. In 1841, seed was sown in open ground, April 8th. In 1842 pie-plant broke ground March 8th, and all early seed were in the ground by the 21st. In 1843 seeds were in by April 20. In 1844 ground was in a working state Feb. 23d, and seeds put in by March 1. Trees, varying according to the nature of the season, complete the *first* growth, on an average, about the 1st of Sept. Their second growth continues, usually, until into November. Last year (1844) I had noisette roses pushing out terminal leaves after *Christmas;* but this is not a frequent occurrence. Upon an average, the middle of March and the 1st of November, may be taken as the limits of the vegetable year—a period of more than seven months. During this season rains are copious, and frequent. Our mid-summer droughts are seldom so severe upon vegetation as they seem to be in New England. During the months of June, July and August, the temperature of mid-day seldom falls below 70° Fahren, and ranges between 70° and 100°.

One other cause of rapid growth is to be mentioned—the nature of our winters. Except when the roots are frozen, they are supposed never to be inactive. During the winter they slowly absorb materials from the soil, and fill the whole system with sap. When the winters are severe, they are usually very long; and the slowness of its winter action is compensated by the length of time afforded to the plant. In the Western States, though our winters are short, yet there is scarcely a week in which trees may not accumulate their stores. The spring growth will be vigorous in proportion to the amount of true sap collected in the vegetable system. As our whole winter is mild enough for this process to go on, the growth of trees, with us, is rampant in spring. Thus, the quality of our soils, and the nature of our seasons—the mildness of winter—the earliness of spring and length of summer—its heat and great atmospheric brilliancy, all conspire to produce very rapid and strong growth in herb, shrub and tree; and I repeat, as a fundamental consideration, that OUR SOIL AND SEASON PREDISPOSE FRUIT TREES TO EXCESSIVE GROWTH. From this fact we

should take our start in every process of orchard, nursery, and garden cultivation of fruit trees; and if philosophically employed it will, we will not say revolutionize, but materially modify the processes of cultivation peculiar to colder climates and poorer soils. In respect to esculent vegetables—cabbages, radishes, celery, rhubarb, lettuce, &c., this rank and rapid growth is beneficial, since it is not the *fruit* but the *plant* which we eat. The reverse is true in fruit trees. Observant cultivators have conformed to this indication of nature, in some things; for instance, in the treatment of the grape. The German emigrants who settled in these parts, having been conversant with vine-dressing in Europe, were usually employed to cut and lay in the vines of such as were desirous of the best gardens. But, gradually, their practice has been rejected, and now, instead of reducing our vines to niggardly stumps, the wood is spared and laid in long. If pruning be close, the vine may be said to overflow with excess of new wood, which does not ripen well. Our remarks more especially apply to regions below 40° of north latitude.

Below this line, our efforts need not be directed to the forcing of growth, for that, naturally, will be all-sufficient. Our object must be *compact and thoroughly ripened wood*. These reasonings may be applied to many practices now generally in vogue.

1. It is the practice of nurseryman to force their trees by cultivation, and by pruning. It is very well known, to those conversant with the nursery business, that great growers and early growers are the favorites, (and, so far as an expeditious preparation of stock for sale is concerned, justly,) that slow and tedious growers are put upon rampant growing stocks to quicken them. In some cases manures are freely applied to the soil, as directed by all writers who teach how to prepare ground for a nursery. But such writers had their eye upon the soil of England or New England. The still more vicious practice of side trimming and free pruning is followed, which forces the tree to produce a great deal of wood, rather than to ripen well a little. A well informed nurseryman ought not to look so much at the *length* of his trees, as to the *quality of their wood*. The very beau ideal of a fruit tree for our climate is one that, while it is hardy enough to grow steadily in cool seasons, is not excitable enough to grow rampantly in warm ones, and which completes its work early in the season, ripens its wood thoroughly, and goes to rest before there is danger of severe frost. Such trees may be had, by skilful breeding, as easily, as, by breeding, any desirable quality may be devoloped in cattle or horses. But of this hereafter.

The subject of pruning will be separately treated; but it is appropriate here to say, that every consideration should incline the nurseryman to grow his trees *with side brush from top to bottom*, and by shortening these, to multiply leaves to the greatest possible extent all over the tree. In this climate we should idolize the *leaf*—in which are the sources of health and abiding vigor.

2. The mistakes of the nursery are carried out and developed by the purchaser, in the following respects—by bad selection, pernicious cultivation, and by improper pruning.

First, trees are selected upon a bad principle. Men are very naturally in a hurry to see their orchards in bearing; precocious trees, therefore, and all means of prematurity are sought. In respect to the pear, it is the popular, but incorrect, opinion that it takes a man's life time to bring them into fruit. Hope deferred, very naturally in such cases, makes the heart sick. But certain talismanic words found in catalogues and fruit manuals restore the courage, and you shall find the pencil mark made upon all pears, described as—"of a vigorous growth," "a rampant grower," "comes early into bearing," "bears young," "a great and early bearer." But such as these—"not of a very vigorous growth," "does not bear young," "the growth is slow but healthy," "grows to a large size before producing fruit,"—are passed by. Many farmers judge of a tree as they would timothy grass. A short-jointed, compact branch, is "*stunted*;" but a long, plump limb, like a water shoot, or a Lombardy poplar branch, is admired as a first rate growth. The Bell pear of this neighborhood

has but this single virtue: it makes wood in capital quantities, but very poor pears. Now our selection must proceed on different principles if our orchards are to be *durable* and *healthy*. We should mark for selection pears described as—"of a compact habit," "growth slow and healthy," "ripens its wood early and thoroughly." A tree which runs far into the fall, and makes quantities of wood more than it can thoroughly ripen, must be regarded as unsafe and undesirable.

There is another marked fault in selecting trees—a disposition to get long and handsome trees with smooth stems. This principle of selection would be excellent when one goes after a bean-pole, or a cane. A fruit tree is not usually cultivated for such uses. In the first place, it is not wise to expose the trunk of a fruit tree to the full sun of our summers. We have seen peach trees killed by opening the head so much as to expose the main branches to the sun. A low head, a short trunk should be sought. When land is scarce, and orchards cultivated, high trimming is employed for the sake of convenience, not of the tree, but of its *owner*. And in cool and humid climates, such evils do not attend the practice, as with us. Beside picking long shanked trees, one would suppose that a leaf below the crotch would poison the tree from the assiduity with which they are trimmed off. It ought to be laid down as a fundamental rule with us, that a tree is benefitted *not by the amount of its wood, but by the extent of its leaf surface.* Every effort should be used to make the length of the wood moderate, and the amount of its leaves abundant. The leaf does not depend for its quality on the wood, *but the wood takes its nature from the leaf.* Young trees ought to be grown with side brush from the roots to the fork. Water shoots from the root are to be removed, but leaves upon the trunk are to be nursed. By cutting in the brush when it tends to a long growth, it will emit side shoots, and still increase the number of leaves.

Secondly. There is great evil in pruning too much. France and England have given us our notions upon pruning. There, their own system is wise, because it conforms to the climate and soil. But their system of pruning is totally uncongenial with our seasons and the habits of our trees. In England, for instance, the peach will not ripen in open grounds, except, perhaps, in the extreme southern counties. In consequence, it is trained upon walls, and its wood thinned, to let light and heat upon every part of it. It is very right to husband light and heat when it is scarce, and by opening the head of a tree to carry them to all parts of the sluggish wood. But we often have more than we want. A peach will ripen, on the lowest limb and inside of the tree, by the mere heat of the atmosphere. Even in New England, the English system of pruning proves too free. Manning says, "From the strong growth of fruit trees in our country and the dryness of its atmosphere, severe pruning is less necessary here than in England." We are not giving rules *for* pruning; but cautions *against* pruning too freely. There is not a single point in fruit cultivation where more mistakes are committed than in *pruning*.

Thirdly, great mistakes are committed in stimulating the growth of trees by enriching the soil. Books direct, (and men naturally and innocently obey) the putting of manure to young trees. We have no doubt that the time will come, when manures will be so thoroughly analysed and classified, that we can employ them just as a carpenter does his tools, or the farmer his implements; if we wish *wood*, we shall apply certain ingredients to the soil and have it; if we wish fruit, we shall have at hand manures which promote the fruiting properties of the tree; if we want seed, we shall have manures for it. But manures as now employed, are, usually, not beneficial to orchards of *young* trees. A clay soil, very stiff and adhesive, may require sand and vegetable mould to render it permeable to the root; some very barren soils may require some manure; but the average of our farms are rich enough already, and too rich for the good of the young tree. It would be better for the orchard if it made less wood and made it better.

If these directions make the prospect of fruit so distant as to discourage the planting of orchards we will add, plant your orchard; and if you cannot wait for its health-

ful growth, plant also trees for immediate use, and serve them just as you please; manure them, cut them, get fruit at all hazards; only make up your minds that they will be short-lived and liable to blight and disease.

Potatoe Onion.

The Albany Cultivator has an excellent article on the cultivation of the potatoe onion. We have seen the article going the rounds of newspapers, as if the potatoe onion were a new kind. This is a mistake. It has been long known, and is enumerated in all good catalogues of esculent vegetables and described in English and American garden books. It was cultivated in England as early, at least, as 1796; and is called Egyptian onion, from an erroneous supposition that it was brought from Egypt by the British army in 1805. Onions propagate their species in three ways: 1. By seed; to this class belong nine out of ten of the kinds cultivated. 2. By bulbs on the top of the stalk; these are the most popular onion in this region, and are exposed for sale by bushels every spring in our stores; they are called *top-onions*. 3. By bulbs produced *under ground;* and these are the potatoe-onion. Persons at all accustomed to cultivate flowring bulbs, know that they are increased by offsets from the parent bulb, called *sets*, or *cloves*. The potatoe onion is simply a kind which propagates itself, (like the greatest number of bulbs) by *offsets* from the old bulb. The writer in the Albany Cultivator says:

"In their eating qualities, I do not discover any difference between them and other onions. But for cheapness of cultivation, certainty of crop, and amount of produce upon a given space of ground, they surpass all others."

We dissent from this opinion. The common top-onion is in every respect equal to these, in size, flavor, and keeping; and in the convenience of gathering the bulbs, no one will doubt that it is easier to pluck seed-bulbs from the top of the stalk than to dig them from the ground. The top onion will yield from fifteen to twenty fold, and the potatoe onion only about ten fold. The top-onion, Loudon says, was originally from Canada, where the climate being too cold for onions to flower and seed, when they are allowed to throw up flower-stalks the flower becomes viviparous, and bears bulbs instead of flowers. They are not generally cultivated in England, and if at all, rather as objects of curiosity.

To prevent onions from growing, as they begin to do at this season of the year, take a hot iron and sear the bottom of each bulb. The rim from around which the roots shoot being thus deadened, the bulb will have no disposition to sprout. Of course, such as are for seed, must not be so treated.

Maple Sugar.

As most persons who have not informed themselves on the subject, imagine that we are indebted to cane sugar for our main supply, and that maple sugar is a petty neighborhood matter, not worth the figures employed to represent it, we propose to spend some space in stating the truth on this matter. We will exhibit (1) the amount produced; (2) the proper way of manufacturing it; (3) the proper treatment of sugar-tree groves.

We shall confine our statistics to the most important Northern and Western States.

1. N. York produces annually	10,048,109	lbs.
2. Ohio - - - -	6,363,386	"
3. Vermont - - -	4,647,934	"
4. Indiana - - - -	3,727,795	"
5. Pennsylvania - -	2,265,755	"
6. New Hampshire - -	1,162,368	"
7. Virginia - - -	1,541,833	"
8. Kentucky - - -	1,377,835	"
9. Michigan - - -	1,329,784	"
Total of nine States - -	22,464,799	"
Residue thus; add for Maine, Mass., Conn., Maryland, Tenn., Ill., Iowa, Missouri, Wiskonsan, - -	2,030,853	"
	24,495,652	"

Something should be subtracted for beet root and cornstalk sugar. But, on the other hand, the statistics are so much below the truth on maple sugar, that the deficiency may be set off against beet-root and corn-stalk sugar. That the figures do not more than represent the amount of *maple sugar* produced in these States may be presumed from one case. Indiana is set down at 3,727,795; but

in the four counties of Washington, Warrick, Posey, and Harrison, no account seems to have been taken of this article. In Marion county four of the first sugar-making townships, Warren, Lawrence, Centre, and Franklin, are not reckoned. If we suppose these four townships to average as much as the others in Marion county, they produced 77,648 lbs., and instead of putting Marion county down at 97,064 it should be 174,712 lbs. It is apparent, from this case, that in Indiana the estimate is far below the truth; and if it is half as much so in the other eight States enumerated,* then, 22,464,799 is not more than a fair expression of the *maple sugar* alone.

Louisiana is the first sugar-growing State in the Union. Her produce, by the statistics of 1840, was 119,947,720, or nearly one hundred and twenty million pounds. The States of Mississippi, Alabama, Georgia, South Carolina and Florida, together, add only 645,281 pounds more.

Cane sugar in the U. S. 120,593,001 lbs.
Maple " " " 24,495,652 "

Thus about one-sixth of the sugar made annually in the United States is made from the maple tree.† It is to be remembered too that in Louisiana it is *the* staple, while at the North maple sugar has never been manufactured with any considerable skill, or regarded as a regular crop, but only a temporary device of economy. Now it only needs to be understood that maple sugar may be made so as to have the flavor of the best cane sugar, and that it may, at a trifling expense, be refined to white sugar, and the manufacture of it will become more general, more skilful, and may, in a little time, entirely supercede the necessity of importing cane sugar. Indiana stands fourth in the rank of maple sugar making States. Her annual product is at least *four million pounds*—which at six cents the pound amounts to $160,000 per annum. A little exertion would quickly run up the annual value of our home-made sugar to half a million dollars.

Maple sugar now only brings about two-thirds the price of New Orleans. The fault is in the manufacturing of it. The saccharine principle of the *cane and tree are exactly the same.* If the same care were employed in their manufacture they would be indistinguishable—and maple sugar would be as saleable as New Orleans, and if afforded at a less price, might supplant it in the market. The average quantity of sugar consumed in England by each individual is about 30 lbs. per annum. Marion county contains about 20,000 inhabitants. At 30 pounds per head, the sugar consumed annually is not less than 600,000 pounds, and for the whole State 24,000,000, reckoning the population at 800,000. There is annually produced in this county about 175,000 lbs. of sugar, leaving

* Dr. J. C. Jackson puts Vermont at 6,000,000 lbs. per annum, while the census only gives about 4,000,000.

† The data of these calculations, it must be confessed, are *very* uncertain and conclusions drawn from them as to the relative amounts of sugar produced in different States, are to be regarded, at the very best, as problematical. We extract the following remarks from an article in the Western Literary Journal, from the pen of Charles Cist, an able statistical writer:

"It is not my purpose to go into an extended notice of the errors in the statistics connected with the census of 1840. A few examples will serve to show their character and extent. In the article of hemp, Ohio is stated to produce 9080 tons, and Indiana 8605—either equal nearly to the product of Kentucky, which is reported at 9992 tons, and almost equal, when united, to Missouri, to which 18,010 tons are given as the aggregate. Virginia is stated to raise 25,594 tons, almost equal to both Kentucky and Missouri, which are given as above at 28,002 tons. Now the indisputable fact is, that Kentucky and Missouri produce more hemp than all the rest of the United States, and ten times as much as either Ohio, Indiana or Virginia, which three States are made to raise 50 per centum more than those two great hemp-producing States.

"The sugar of Louisiana is given at 119,947,720 lbs, equal to 120,000 hhds., 160 per cent. more than has been published in New Orleans, as the highest product of the five consecutive years, including and preceding 1840.

"But what is this to the wholesale figure-dealing which returns 3,160,949 tons of hay, as the product of New York for that article!!! a quantity sufficient to winter all the horses and mules in the United States.

"Other errors of great magnitude might be pointed out: such as making the tobacco product of Virginia 11,000 hhds., when her inspection records show 55,000 hhds. thrown into market as the crop of that year. Who believes that 12,233 lbs. pitch, rosin and turpentine, or the tenth part of that quantity, were manufactured in Louisiana in 1840, or that New York produced 10,093,991 lbs. maple sugar in a single year, or twenty such statements equally absurd, which I might take from the returns?"

Mr. Cist will find in the appendix to Dr. Jackson's Final Report on the Geology of New Hampshire, a statement, that Vermont makes 6,000,000 pounds of sugar annually. If this be so, we may, without extravagance, suppose that New York reaches 10,000,000 lbs. So far as we have collateral means of judging, the amount of maple sugar is *under*-stated in the census of 1840.

about 425,000 to be purchased, which, at an average of *five* cents per lb., amounts for this single county, to $21,250—a sum well worth saving, and by a little attention to the making of domestic sugar, very easily saved.

Maple Sugar Making.

1. Greater care must be taken in collecting the sap. Old, and half decayed wooden troughs with a liberal infusion of leaves, dirt, &c., impart great impurity to the water. Rain water, decayed vegetable matter &c. add *chemical* ingredients to the sap, troublesome to extract, and injuring the quality if not removed. The expense of clean vessels may be a little more, but with care, it could be more than made up in the quality of the sugar. Many are now using earthen crocks. These are cheap, easily cleaned, and every way desirable, with the single exception of breakage. But if wood troughs are used, let them be kept scrupulously clean.

2. The kettles should be scoured thoroughly before use, and kept constantly clean. If rusty, or foul, or coated with burnt sugar, neither the color or flavor can be perfect. Vinegar and sand have been used by experienced sugar makers to scour the kettles with. It is best to have, at least, three to a range.

All vegetable juices contain *acids;* and acids resist the process of crystalization.

Dr. J. C. Jackson* directs one *measured ounce* (one-fourth of a gill) of pure lime-water to be added to every gallon of sap. This neutralizes the acid and not only facilitates the granulation, but gives sugar in a free state—now too generally acid and deliquescent, besides being charged with salts of the oxide of iron; insomuch that it ordinarily strikes a black color with tea.

The process of making a pure white sugar is simple and unexpensive. The lime added to the sap, combining with the peculiar acid of the maple, forms a neutral salt; this salt is found to be easily soluble in alchohol.—Dr. Jackson recommends the following process. Procure sheet-iron *cones*, with an aperture at the small end, or apex--let it be coated with white lead and boiled linseed oil, and thoroughly dried so that no part can come off. [We do not know why earthen cones, unglazed, and painted, would not answer equally well, besides being much cheaper.] Let the sugar be put into these cones, stopping the hole in the lower end until it is entirely cool. Then remove the stopper, and pour upon the base a quantity of strong whiskey or fourth proof rum†--allow this to filtrate through until the sugar is white. When the loaf is dried it will be pure white sugar, with the exception of the alchohol. To get rid of this, dissolve the sugar in pure boiling hot water and let it evaporate until it is dense enough to crystalize. Then put it again into the cone-moulds and let it harden. The dribblets which come away from the cone while the whiskey is draining, may be used for making vinegar. It is sometimes the case that whiskey would, if freely used in a sugar camp, go off in a wrong direction, benefitting neither the sugar, nor sugar maker. If, on this account, any prefer another mode, let them make a *saturated* solution of loaf sugar and pour it, in place of the whiskey, upon the base of the cones. Although the sugar will not be quite as white, the *drainings* will form an excellent molasses, whereas the drainings by the former method are good only for vinegar.

3. *Care of Sugar Orchards.*

It is grievious to witness the waste committed upon valuable groves of sugar trees. If the special object was to destroy them, it could hardly be better reached than by the methods now employed. The holes are carelessly made; and often the abominable practice is seen, of cutting channels in the tree with an axe. The man who will murder his trees in this tomahawk and scalping-knife manner, is just the man that Esop meant when he made the fable of a fellow who killed his goose to get at once all the golden eggs. With good care, and allowing them occasionally a year of rest, a sugar grove may last for centuries.

* Appendix to final Report on the Geology and Minerology of New Hampshire, page 361. This admirable Report is an able exposition of the benefit of public State surveys.

† If those who drink whiskey would pour it onto the sugar in the refining cones, instead of upon sugar in tumblers, it would refine *them* as much as it does the sugar; performing two valuable processes at once.

1. As soon as possible, get your sugar tree grove laid down to grass, clear out underbrush, thin out timber and useless trees. Trees in open land make about *six pounds* of sugar, and forest trees only about *four* pounds to the season. As the maple is peculiarly rich in potash (four-fifths of potash exported is made from sugar maple) it is evident that it requires that substance in the soil. Upon this account we should advise a liberal use of wood ashes upon the soil of sugar groves.

2. *Tapping trees.* Two taps are usually enough—never more than three. For tho' as many as 24 have been inserted at once without killing the tree, regard ought to be had to the use of the tree through a long series of years. At first, bore about two inches; after ten or twelve days, remove the tap and go one or two inches deeper. By this method more sap will be obtained than by going down to the colored wood at first. I state, upon the authority of Wm. Tripure, a Shaker of Canterbury, N. H., that about 7 lbs. of sugar may be made from a bbl. of 20 gallons, or 4 pounds the tree for forest trees, and two men and one boy will tend a thousand trees, making 4,000 lbs. of sugar.

3. We would recommend the setting of pasture lands, and road sides of the farm with sugar maple trees. Their growth is rapid, and no tree combines more valuable properties. It is a beautiful shade tree; it is excellent for fuel, it is much used for manufacturing purposes; its ashes are valuable for potash; and its sap is rich in sugar.—There are twenty-seven species of the maple known; twelve of them are indigenous to this continent. All of these have a sacharine sap, but only two, to a degree sufficient for practical purposes, viz: *acer saccharinum* or the common sugar maple, and *acer nigrum* or the *black* sugar maple. The sap of these contains about half as much sugar as the juice of the sugar cane. One gallon of pasture maple sap contains, on an average, 3,451 grains of sugar; and one gallon of cane juice, (in Jamaica) on an average yields 7,000 grains of sugar.

But the cane is subject to the necessity of annual and careful cultivation, and its manufacture is comparatively expensive and difficult. Whereas the maple is a permanent tree, requires no cultivation, may be raised on the borders of farms without taking up ground, and its sap is easily convertible into sugar, and, if carefully made, into sugar as good as cane sugar can be. Add to the above considerations that the sugar-making period with us is a time of comparative leisure with the farmer, and the motives for attention to this subject of domestic sugar making seem to be complete.

Protecting Shade Trees.

Our town has shown great taste in filling the streets with shade trees; and it is a great pity that this labor should be lost by a neglect to protect them from animals. We see in various parts of the town a partial or entire destruction of the bark of Locust trees. The inner bark of this tree is very palatable to cattle; a great many persons keep their cows in such a starved condition, as to insure their eating trees, or any thing else edible. The lots directly opposite the State House had trees four inches in diameter around their border; the fence was thrown down about a year ago, and cows deliberately stripped some 30 fine locust trees, which even now stand pealed and dead. The beautiful church now building by the Methodist Society, (Eastern charge,) is surrounded by locust trees from six to ten years old. They are entirely unprotected, and we perceive that cattle are stripping some of them. Will not friend Wilkins look to this before any more mischief is done? And while he is about it, will he keep an eye upon the trees along the street on which he lives? In our next number we intend urging the subject of planting shade trees.

California Tobacco.

Our own propensities do not incline us either to cultivate or consume this poisonous, filthy weed; but those who are bewitched by its sorcery, may be glad to know that the Georgians are quite elated by a new kind—the California tobacco. It is described as early—bearing transplanting better than other kinds, ripening ten or fifteen days before the ordinary crop; it has a "large,

broad, silky leaf, of a fine texture and cures of a rich color; and some plants grow as large as seven feet across from point to point." From the description, we have not the least doubt but that it is exactly the sort to make a man's mouth water.

Garden Seeds.

It is time that seeds should be selected. Good seeds are the very first requisite for a good garden; soil and culture cannot make good crops out of bad seed.

1. As a general rule, *buy your seeds*. The reasons for it are so many and so good, that you will certainly do it, unless *economy* prevent; but it is better to economise elsewhere.

In the first place, seed-raising is a delicate business; and, for many reasons, will be better done by those who make it their business, than by those who do not. A reputable seedsman never dreams of raising, himself, all the seeds which he sells. For example, one sort of seed is let out to a farmer who contracts to raise it in a given soil and manner, and at a distance from all other seeds. One man raises the beet seed—another man, very often hundreds of miles distant, another sort. Peas are sent to Vermont and to Canada, where the pea-bug does not infest them. Some seeds, for which this climate is not favorable, are imported from Italy, from Guernsey—just as flowering bulbs are from Holland. We suppose this to be true of Landreth, Thornburn, Prince, Breck, Risley, &c. In cases where seeds are raised upon the premises of the seedsman, they are put on different parts of the farm, as far apart as possible.

These precautions are indispensible to the procuration of the *best* seeds of esculent vegetables. Species of the same genus, with open flowers, are so easily *crossed*, that, if grown contiguously, they cannot be kept pure. All *cucurbitaceous* plants, such as squashes, pumpkins, melons, cucumbers, gourds, &c., will mix and degenerate if planted even in the same garden. Let any one who wishes to see how it is done, watch the bee covering itself with golden pollen as it searches for honey in the cells of the flower, and darting off to another, mingling the fertilizing powder of the two. In a single morning, cucumbers will be mixed with each other, and with canteleupes; squashes will be crossed, and in the next generation will shew it. Where the organs of flowers are protected, as in the pea, bean, &c., by a floral envelope, insects do not mix their pollen. I have never known pure beet seed raised in a private garden which had more than the single kind in it—or when another garden was near which had other sorts.

We prefer, *generally*, northern seeds to those raised among us. A mere change of soil and climate is often advantageous to seeds. But besides this, greater care and skill are usually employed at the north in producing sound and safe seeds.

We can recommend, from repeated trials, the seeds of Risley, Chatauque county, N. Y. and of Mr. Breck of Boston. Landreth of Philad. has a high reputation, but we have been unfortunate in using his seeds—very probably from lack of skill. We shall try them again next summer. The poorest seeds we have tried were the "Union Village" seeds. Our early York cabbages proved to be trifling flower seeds—Lima beans were the white Dutch runners. Not one of five of their peas vegetated. The beets were not good seed, and the variety (blood beet) not pure. The experience of others, at this point, is like ours. Unless more care is taken in that establishment their seeds will lose all credit. Their lettuce seed has always proved good, and such others as are easy to raise.

2. We insert a table, exhibiting the years which different seeds will retain their vitality.

	YEARS.		YEARS.
Asparagus	4 or 13	Marjoram	4
Balm	2	Melon	8 or 10
Basil	1 or 3	Mustard	3 or 4
Beans	1 or 2	Nasturtium	2 or 3
Beets	8 or 10	Onion	3
Borage	2	Parsley	5 or 6
Cabbage	6 or 8	Parsnep	1
Carrot	1 or 7	Pea	2 or 3
Celery	6 or 8	Pumpkin	8 or 10
Corn	2 or 3	Pepper	5 or 6
Cress	2	Raddish	6 or 8
Cucumber	8 or 10	Rue	3
Caraway	4	Ruta Baga	4
Fennel	5	Salsafy	2

Garlic	3	Savory	3 or 4
Leek	3 or 4	Spinage	3 or 4
Lettuce	3 or 4	Squash	8 or 10
Mangel Wurtzel	8 or 10	Turnep	3 or 4

Some seeds retain their power of germination to an astonishing length of time, as will appear from facts stated by Prof. Lindley:

"Not to speak of the doubtful instances of seeds taken from the Pyramids having germinated, Melons have been known to grow at the age of 40 years, Kidneybeans at 100, Sensitive-plant at 60, Rye at 40; and there are now growing, in the garden of the Horticultural Society, Raspberry plants raised from seeds 1600 or 1700 years old." (See *Introduction to Botany*, ed. 3. p. 358.)

But in selecting seeds, *fresh* ones should always be had if possible. Where, however, the vegetable is cultivated for the sake of its flower, or its fruit, it is sometimes better to select old seed. Thus Balsamines (the touch-me-not) and the cucumber, squash, and melon tribe do better on seeds three or four years old; for, fresh seeds produce plants whose growth will be too luxuriant for producing fruit; whereas from old seed, the plants have less vigor of growth but a greater tendency to fruit well. The preparation of seed for planting, will require another article, which shall be given in proper time.

Farmers' Gardens.

Farmers are apt to have very inferior gardens. The plea is, that in the spring they have no time; the farm crops are of more importance. In consequence of such a decision, no garden will be had unless the housewife is willing to be gardenwife too. At her importunity at length one horse is put to the plow and the garden is broken up —say four inches deep. Possibly the boy is allowed to throw up the beds, but very often even this is left to woman's hand. She has to hunt up seed; peppers are pulled off from the ceiling and eviscerated, drawers are ransacked for the bag of raddish seed or the paper of lettuce seed; the old broken pitcher is taken from its long seclusion on the top of the cupboard and emptied of its beans and peas; withal a few flower seeds are added to grace the stock—four o'clocks, poppies, marigolds, and touch-me-nots. Our gardenwife is not so admirable for lily hands or fair face, or fairy form. She cannot walk over dewy flowers without crushing them, as can a true heroine; for her specific gravity gives evidence of a good constitution, health and habits.

Her praise is, that in a new country where woman unquestionably suffers the most of hardships, she is cheerful, contented, industrious, enterprising, and, like women the world over, seeks to draw around herself objects of taste and beauty to decorate and cheer her husband's and her children's home; and if necessary, to do it by the field-labor of her own hands. I could not forbear saying so much of the meritorious gardener of more than half the rural gardens in the West.

The seeds all mustered, she may be seen, after the breakfast things are all done up, busy with spade and hoe, hiding her treasures. And thus she does it. First a liberal suit of onion beds,—savory vegetable to the tongue and most unsavory to the nose, making it almost impossible for these respectable neighbors to live together in peace, one or other of them being in bad odor with the other. Next a seed-bed full of cabbages—significant to the imagination of cold-slaw, sour-crout, &c. A good row of peas, and a few hills of running beans are added. The alleys are ruffled with bush beans; a few early potatoes, some corn for roasting-ears, with a slender bed for beets, complete the stock of esculents. But sage, and summer savory, and thyme, and rue, and sweet marjoram, tansey, boneset and wormwood are attended to; a part for stuffing ducks and chickens—and the others for curing those who have been too much stuffed *with* them. The garden yields in due time its first fruits; the potatoes come and go, the corn is early plucked, lettuce shoots up its seed-stalk, peas render their tribute and grow sear, beans rattle in the pod, and before August her work is done and her garden forsaken except a small retinue of flowers, which are nursed to the last. Weeds now make up for lost time, and in a few weeks a weedy forest hides every trace of cultivation. This is not a fancy sketch; we have been far

from drawing a picture from the worst specimens; it is a fair average case.

Our business is, not to quarrel with the farmer, but to suggest a better plan for his garden. We saw the plan stated some years ago; where, we have forgotten, but think well of it. It is simply this; let the garden be an oblong,—say three times as long as it is broad—and cultivate it with the *plow*. Instead of having beds, let all seeds be planted in rows running the whole length of the garden. For example begin with one row of beets—or more if wanted; next a row or rows of carrots, parsneps, cabbages, potatoes, corn, and all about three feet apart. The same system should be followed for small fruits—currants, gooseberries, strawberries, raspberries, &c.—and it will have this advantage over common gardens, that the bushes will have sun and air on all sides, and be more fruitful and more healthy for it. The whole garden, thus arranged, can be kept in order with very little labor. A single-horse plow will dress between the rows of the whole garden in a very little time and save all hand-hoeing. The hand-weeding in the row may be performed by women or children.

In large towns ground is scarce and labor abundant. Gardens, therefore, are properly laid out for economy of space. In the country the reverse is true; land is abundant but labor scarce and dear; of course gardens should be laid out not to save room, but to economise labor. The plan suggested will save labor, improve the garden, and take from the wife the drudgery of the spade and hoe.

Editorial Summary.

Wiskonsan was organized into a Territorial Government in 1836. It is estimated to contain 47,000,000 acres, only ten millions of which are yet surveyed. From 1835 to Jan. 1842, 3,909,418 acres were sold. Its lead mines are inexhaustible, and were in 1840, yielding *one half* of the whole amount produced in all the U. States.—The real and personal property in 1843 amounted to more than *eight millions*. The Governors have been Henry Dodge, J. G. Doty and N. P. Talmadge. Southport on the lake between Chicago and Milwaukie is destined to be a point of importance. The first frame was built there in 1835; in 1843 it had 1820 inhabitants.—Flour sold there in 1836, at $18 per bbl. Pork at $30, Potatoes $1 50 per bushel. Now quantities of all these are exported.—Condensed from Cin. Herald.

Indiana Coal. In a report made to Congress on Coal in the United States, Professor Johnson says:

"Experiment appears to demonstrate that, for the purpose of *rapid* evaporation, and for the production of illuminating gas, the coal of Indiana, though neither very heavy nor very durable, is inferior to none of the highly bituminous class to which it belongs; since in heating power, and in freedom from impurity, it surpasses the splint and cannel coal of Scotland."

The bed now worked lies on the Ohio river; it passes under the river and appears again in Kentucky. A town named Cannelton has sprung up upon the Indiana side and is rapidly increasing. An eastern company work the mine, and to their enterprise Indiana will be indebted for one of her most thriving places.

What is a Bushel? In N. Y. city fifty six pounds are regarded as the weight of a bushel of corn. A great controversy has arisen as to what constitutes a bushel; is it a weight or a measure? Some affirm the one and some the other. One side says: If two half bushels by measure do not make a bushel, what do they make?"—The other side, not a whit daunted, say: "Two half bushels are certainly a whole bushel; and yet nothing is a bushel but 56 lbs. whether it fills two half bushels or three." Both sides agree to abide by the usual *practice*; and both claim it on their own side; and doubtless correctly, for practice has never been determinate; both ways of estimating have been prevalent. Meanwhile Duns Scotus, Thomas Aquinas, and their theological companions who used gravely to discuss, with infinite philosophy, whether two angels, being spirits, could stand at the same time on the point of a cambric needle, now nestle in their graves, we presume, to get at this subtle question. But let their perturbed spirits rest; for while South Carolina lives we need no venerable schoolman to discourse infinitesimal nonsense, with all the appearance of learning and philosophy.

Real Estate in Ohio.—The Governor of Ohio estimates that there are 20,000,000 acres of land in that State suitable for cultivation, and that about 9,000,000 acres, including meadows and pasture land, are now actually cultivated. He also estimates the real property of the State, with the improvements, to be worth $420,000,000, and the personal effects at $180,000,000, making a total aggregate of $600,000,000.

The Hamilton county (Ohio) Agricultural Society in a petition to the Legislature, 1844, state that 17,000,000 bushels of wheat are raised in Ohio. The average yield for the last twenty years has been *sixteen* bushels per acre; sixty cents has been an average price. The cost of cultivation $6,75 per acre. This leaves about $2,35, which is only about 6 per cent interest on the value of the land.

Benefits of Geological Surveys.—Dr. Jackson has, in his survey of N. Hampshire, discovered unsuspected mineral treasures. The N. Y. Tribune says:

In the town of Bartlett there was a locality considered worthless: but Dr. Jackson discovered on this lot an iron mine of excellent quality of ore, and inexhaustible in amount; it has been sold since for $10,000. In Eaton a vein of zinc ore was discovered, more abundant than that of Bristol, England. The mine will furnish zinc sufficient to supply all New England. At Warren there is copper ore of a rich character, and in such quantity as

to warrant mining operations; it contains 34 per cent. of copper, while the richest ores of Cornwall do not contain more than 17 per cent. In Jackson the first vein of tin that has come to light in the United States was discovered; the ore is sufficiently abundant to pay for working.

The lead ores of Eaton and Shelburne have been found to contain a sufficiency of silver to warrant their being wrought for that metal. The lead of Eaton contains two pounds, and that of Shelburne three pounds of silver to the ton. The silver may be separated from the lead without difficulty, by processes described in the Report.

It is believed that no State can boast of so large a catalogue of metals as New Hampshire. Without regarding the metalic bases of the earths and alkalies, there are found in New Hampshire seventeen metals, viz: iron, zinc, copper, lead, tin, antimony, silver, gold, molybdenum, manganese, chrome, titanium, cadmium, cobalt, arsenic, tungsten, uranium.

Will the farmers of N. Hampshire ask, as some have done in Indiana, what is the use of a Geological Survey?

Chrystals in Plants.—Professor J. W. Bally of West Point, has published an article in Silliman's Journal of Science and Arts, in which he states that he has discovered vast numbers of microscopic chrystals in the leaves and bark of a large number of plants. They have polished *facets* as brilliant as gems, although they are not more than 1-1200 of an inch long. Those in leaves are arrayed in rows along the ducts and passages, so that the minutest vein has its brilliant line of chrystals. He has, by analysis, ascertained that they are composed of oxalate of lime. The same gentleman in another work states, "Charleston S. C. is built upon a bed of animalcules several hundred feet in thickness, *every cubic inch of which is filled with myriads of perfectly preserved microscopic shells.*" "The animalcules, to whose labors South Carolina owes so large a portion of her territory, are hard at work, in countless thousands upon her coasts, filling up harbors, forming shoals, and depositing their shells to record the present state of the sea shore, as their predecessors, now entombed beneath Charleston, have done with regard to ancient oceans."

Fruit and Flower Market. The citizens of N. York have petitioned the corporation to grant a piece of land in that city for the purpose of building a Market house to be used exclusively for the sale of Fruit and Flowers. The petitioners offer to build at their own expense. Such markets are common in Europe and nothing can be more beautiful than a long range of stalls filled with fragrant fruits of every kind, and hue, and with flowers of every variety, in boquets, or wreaths, or in pots. No doubt, ladies would be found there as thick as butterflies on a summer bank of flowers, and wary bachelors as scarce as birds in winter; for though ladies may be resistible if unarmed, it will be very different when they are blushing from under gypsey bonnets and armed with fruits and flowers.

TABLE OF PRICES CURRENT

At Cincinnati, Louisville, Lawrenceburgh, Madison, Indianapolis, Lafayette, Ft. Wayne, &c.

	Indianapolis.	Cincinnati.	Louisville.	Madison.	Lawrenceburgh.	Lafayette.	Ft. Wayne.	Michigan City.
GRAIN.								
Corn, per bushel,	20a25 cts.	33a35	25a30	25a30		28a30	40 cts.	
Wheat per " –	50 cts.	75 cts.	75 cts.	60a70		58a60	60a68	
Oats per " –	18a20	23a25	20a25	15a20		20a22	30a33	
FLOUR, per bbl., –	3.25	3,50a3,53	3,80a4,00	3.75a3.87		3.15a3,50	3,50	
CORN MEAL, p. bush.	25 cts.			30a35		31a31	50	
PORK, &c.								
Clear, per bbl. –	none	10,00	10,0a10,50					
Mess, – – –	none	9,00	9,00a9 25				9.00	
Prime, – –	none	7,00a7.25	7,00a7.50					
Hams, per lb. –	5 cts.	5 cts.	5¼a5½	6		5a6		
Hog round, – –	2½ ct.	3⅜		4		2a3		
Lard, – – –	5a6	5¼a6	prime 6	5a6		5a6	5a6	
CATTLE—								
On foot, – –		3,25a3,30	2,56a3,75					
Beef in barrels, –								
FRUIT—								
Apples, dried, –	87	75a80	75a87			50a1,00	1,00	
" green, –	37	62a75	62a75	62a95		25a37	50,	
Peaches, dried, –	1,12½	1,12½	1,00a1,12½	1,25		1,25a1,37	1,50	
SEEDS—								
Clover, – –	4 00	3,50a3,62	4,12a4,25	4,00a4,50		3,50a3,75		
Timothy, – –	1 00		1,87a2,25	1,25a1,50		88a1,00		
Hemp, – – –		50 cts.	50 cts.	50a62		94a1,00		
Flax, – –	68 cts.	1,00a1,05	95a1.00	1,00		78a75		
SALT—								
Kenhawa, – –		1,32a1,95		25 per bu				
Onondaga, – –	3 50					2.00a2,25	2,50	
FEATHERS, per lb, –	25 cts,	24a27	25	25a27		20a22	25	
TALLOW, per lb, –	4a5	4a6	4a6	5		5a6		
HIDES, – –		4a9½					7a8	
BEESWAX, – –	25	25	25	25		22a24	25	
BUTTER, – –	12a18	15a25	12a20	12a15		12a15	10a12½	
EGGS, – – –	5a6	12a14					8 cts.	
COFFEE, – –	8a10			7a8		7a10		
SUGAR, – – –	8a10	4¼a5		4a6		8a9		